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OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

*DMP*

SEPTEMBER 11, 1997

PTAS

FOLEY, HOAG & ELIOT LLP  
MATTHEW P. VINCENT, PH.D.  
ONE POST OFFICE SQUARE  
BOSTON, MA 02109



\*100518333A\*

100518333A  
09/466568  
JUL 490 U.S. PAT. & TM. OFF.



UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

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RECORDATION DATE: 08/15/1997

REEL/FRAME: 8654/0670  
NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

CRABTREE, GERALD

DOC DATE: 07/22/1997

ASSIGNEE:

LELAND STANFORD JUNIOR UNIVERSITY, BOARD OF TRUSTEES OF  
STANFORD UNIVERSITY  
STANFORD, CALIFORNIA 94305

SERIAL NUMBER: 08388653  
PATENT NUMBER:

FILING DATE: 02/14/1995  
ISSUE DATE:

MAYA BENNETT, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

RECEIVED

SEP 17 1997

F.H. & E. LLP  
PATENT DEPT.

1597

08-27-1997

FORM PTO-1595  
(Rev. 6-93)  
OMB No. 0651-0011 (exp. 4/94)



COVER SHEET

U.S. DEPARTMENT OF  
COMMERCE  
Patent and Trademark Office

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100518333

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

Gerald Crabtree

Additional name(s) of conveying party(ies) attached?

☐ Yes ☒ No

3. Nature of conveyance

☒ Assignment

☐ Merger

☐ Security Agreement

☐ Change of Name

Other \_\_\_\_\_

Execution Date: \_\_\_\_\_

2. Name and address of receiving party(ies)

Name: Board of Trustees of Leland Stanford  
Junior University

Street Address: Stanford University

City: Stanford State: California

ZIP: 94305

Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application number(s) or patent number(s):

A. Patent Application No.(s)

08/388,653

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Matthew P. Vincent, Ph.D.

Telephone: (617) 832-1000

Internal Address: Foley, Hoag & Eliot LLP

Street Address: One Post Office Square

City: Boston State: MA ZIP: 02109

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.41).....\$40.00

☒ Enclosed

☐ Authorized to be charged to deposit account

8. Deposit account number: 06-1448

Attach duplicate copy of this page if paying by deposit account

DO NOT USE THIS SPACE

9. Statement and signature: *To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*

Matthew P. Vincent, Ph.D.

Name of Person Signing

Signature

Date

Total number of pages including cover sheet, attachments, and document:

Mail documents to be recorded with required cover sheet information to:

Commissioner of Patents and Trademarks, Box Assignments

Washington, D.C. 20231

**ASSIGNMENT**

I, Gerald L. Crabtree of Woodside, California, in consideration of one dollar and other valuable consideration paid to me by the Board of Trustees of the Leland Stanford Junior University, a corporation of the state of California, having its principal place of business at Stanford University, Stanford, California 94305, the receipt of which is hereby acknowledged, do hereby sell, assign and transfer unto said

**Board of Trustees of the Leland Stanford Junior University**

Its successors and assigns, the entire interest for the United States of America and all foreign countries, including all rights of priority under the international convention for the protection of industrial property in a certain invention or improvement in

***Regulated Transcription of Targeted Genes and Other Biological Events***

Described in patent application serial no. 08/388,653 filed on 14 February 1995 in the United States Patent and Trademark Office, and in all letters patent of the United States and all foreign countries which may or shall be granted on said invention, or any parts thereof, or on said application, or any divisional, continuing, reissue or other applications based in whole or in part thereon. And I agree, for myself and my executors and administrators, with said corporation and its successors and assigns but at its or their expense and charges, hereafter to execute all applications, amended specifications, deed or other instrument, and to do all acts necessary or proper to secure the grant of letters patent in the united states and in all other countries to said corporation, with specifications and claims in such form as shall be approved by the counsel of said corporation and to vest and confirm in said corporation, its successors and assigns, the legal title to all such patents.

And I do hereby authorize and request the Commissioner of Patents and Trademarks of the United States to issue such letters patent as shall be granted upon said application or applications based thereon to said corporation, its successors and assigns.

Witness my hand this 22<sup>nd</sup> day of July, 1997.

By: Gerald L. Crabtree

Gerald Crabtree

Then personally appeared the above named Gerald Crabtree and acknowledged the foregoing instrument to be his free act and deed, before me, this 22 day of July, 1997.

Sara Ann Jalbert  
Witness signature

SARA ANN JALBERT  
Witness name (please print)



*Dmjo*  
**UNITED STATES DEPARTMENT OF COMMERCE**  
**Patent and Trademark Office**  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

SEPTEMBER 11, 1997

PTAS

FOLEY, HOAG & ELIOT LLP  
MATTHEW P. VINCENT, PH.D  
ONE POST OFFICE SQUARE  
BOSTON, MA 02109



*APV-31605*

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

*jc490 U.S. PTO*  
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*12/17/99*

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RECORDATION DATE: 08/15/1997

REEL/FRAME: 8654/0656  
NUMBER OF PAGES: 5

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

WANDLESS, THOMAS J.

DOC DATE: 07/16/1997

ASSIGNOR:

SPENCER, DAVID M.

DOC DATE: 07/17/1997

ASSIGNOR:

SCHREIBER, STUART L.

DOC DATE: 07/22/1997

ASSIGNOR:

BELSHAW, PETER

DOC DATE: 07/17/1997

ASSIGNEE:

PRESIDENT AND FELLOWS OF HARVARD COLLEGE  
17 QUINCY STREET  
CAMBRIDGE, MASSACHUSETTS 02138

SERIAL NUMBER: 08388653

FILING DATE: 02/14/1995

PATENT NUMBER:

ISSUE DATE:

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**SEP 17 1997**

**F.H. & E. LLP**

8654/0656 PAGE 2

MAURICE CARTER, EXAMINER  
ASSIGNMENT DIVISION  
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8-15-97

08-27-1997

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(Rev. 6-93)  
OMB No. 0651-0011 (exp. 4/94)



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100518332

▽ ▾ ▾

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

- (a) Thomas J. Wandless
- (b) David M. Spencer
- (c) Stuart L. Schreiber
- (d) Peter Belshaw

Additional name(s) of conveying party(ies) attached?

☐ Yes ☒ No

3. Nature of conveyance

- ☒ Assignment ☐ Merger
- ☐ Security Agreement ☐ Change of Name

Other: \_\_\_\_\_

Execution Date: (a) July 16, 1997; (b) & (d) July 17, 1997

2. Name and address of receiving party(ies)

Name: President and Fellows of Harvard College

Internal Address: \_\_\_\_\_

Street Address: 17 Quincy Street

City: Cambridge

State: Massachusetts ZIP: 02138

Additional name(s) & address(es) attached? ☐ Yes ☒ No

10-490 U.S. PTO  
09/466568  
12/17/99

4. Application number(s) or patent number(s):

A. Patent Application No.(s)

08/388,653

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Matthew P. Vincent, Ph.D.

Telephone: (617) 832-1000

Internal Address: Foley, Hoag & Eliot LLP

Street Address: One Post Office Square

City: Boston State: MA ZIP: 02109

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.41).....\$40.00

- ☒ Enclosed
- ☐ Authorized to be charged to deposit account

8. Deposit account number: 06-1448

Attach duplicate copy of this page if paying by deposit account

9. Statement and signature: *To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*

Matthew P. Vincent, Ph.D.

Name of Person Signing

Signature

Date

8/4/97

Total number of pages including cover sheet, attachments, and document:

Mail documents to be recorded with required cover sheet information to:  
Commissioner of Patents and Trademarks, Box Assignments  
Washington, D.C. 20231

**ASSIGNMENT**

I, Thomas J. Wandless of Palo Alto California, in consideration of one dollar and other valuable consideration paid to me by the President and Fellows of Harvard College, a corporation of the state of Massachusetts, having its principal place of business at 17 Quincy Street, Cambridge, MA 02138, the receipt of which is hereby acknowledged, do hereby sell, assign and transfer unto said

**President and Fellows of Harvard College**

Its successors and assigns, the entire interest for the United States of America and all foreign countries, including all rights of priority under the international convention for the protection of industrial property in a certain invention or improvement in

***Regulated Transcription of Targeted Genes and Other Biological Events***

Described in patent application serial no. 08/388,653 filed on 14 February 1995 in the United States Patent and Trademark Office, and in all letters patent of the United States and all foreign countries which may or shall be granted on said invention, or any parts thereof, or on said application, or any divisional, continuing, reissue or other applications based in whole or in part thereon. And I agree, for myself and my executors and administrators, with said corporation and its successors and assigns but at its or their expense and charges, hereafter to execute all applications, amended specifications, deed or other instrument, and to do all acts necessary or proper to secure the grant of letters patent in the united states and in all other countries to said corporation, with specifications and claims in such form as shall be approved by the counsel of said corporation and to vest and confirm in said corporation, its successors and assigns, the legal title to all such patents.

And I do hereby authorize and request the Commissioner of Patents and Trademarks of the United States to issue such letters patent as shall be granted upon said application or applications based thereon to said corporation, its successors and assigns.

Witness my hand this 16<sup>th</sup> day of July, 1997.

By: Thomas J. Wandless  
Thomas J. Wandless

Then personally appeared the above named Thomas J. Wandless and acknowledged the foregoing instrument to be his free act and deed, before me, this 16<sup>th</sup> day of July, 1997.

Susan Learned - Driscoll  
Witness signature

Susan Learned - Driscoll  
Witness name (please print)

**ASSIGNMENT**

I, Stuart L. Schreiber of Cambridge, Massachusetts, in consideration of one dollar and other valuable consideration paid to me by the President and Fellows of Harvard College, a corporation of the state of Massachusetts, having its principal place of business at 17 Quincy Street, Cambridge, MA 02138, the receipt of which is hereby acknowledged, do hereby sell, assign and transfer unto said

**President and Fellows of Harvard College**

Its successors and assigns, the entire interest for the United States of America and all foreign countries, including all rights of priority under the international convention for the protection of industrial property in a certain invention or improvement in

***Regulated Transcription of Targeted Genes and Other Biological Events***

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And I do hereby authorize and request the Commissioner of Patents and Trademarks of the United States to issue such letters patent as shall be granted upon said application or applications based thereon to said corporation, its successors and assigns.

Witness my hand this 22 day of July, 1997.

By: 

Stuart L. Schreiber

Then personally appeared the above named Stuart L. Schreiber and acknowledged the foregoing instrument to be his free act and deed, before me, this 22 day of June, 1997.

  
Witness signature

SARA ANN SALBERT  
Witness name (please print)



## ASSIGNMENT

I, David M. Spencer of Houston, Texas, in consideration of one dollar and other valuable consideration paid to me by the President and Fellows of Harvard College, a corporation of the state of Massachusetts, having its principal place of business at 17 Quincy Street, Cambridge, MA 02138, the receipt of which is hereby acknowledged, do hereby sell, assign and transfer unto said

### President and Fellows of Harvard College

Its successors and assigns, the entire interest for the United States of America and all foreign countries, including all rights of priority under the international convention for the protection of industrial property in a certain invention or improvement in

### *Regulated Transcription of Targeted Genes and Other Biological Events*

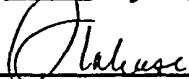
Described in patent application serial no. 08/338,653 filed on 14 February 1995 in the United States Patent and Trademark Office, and in all letters patent of the United States and all foreign countries which may or shall be granted on said invention, or any parts thereof, or on said application, or any divisional, continuing, reissue or other applications based in whole or in part thereon. And I agree, for myself and my executors and administrators, with said corporation and its successors and assigns but at its or their expense and charges, hereafter to execute all applications, amended specifications, deed or other instrument, and to do all acts necessary or proper to secure the grant of letters patent in the united states and in all other countries to said corporation, with specifications and claims in such form as shall be approved by the counsel of said corporation and to vest and confirm in said corporation, its successors and assigns, the legal title to all such patents.

And I do hereby authorize and request the Commissioner of Patents and Trademarks of the United States to issue such letters patent as shall be granted upon said application or applications based thereon to said corporation, its successors and assigns.

Witness my hand this 17 day of JULY, 1997.

By:   
David Spencer

Then personally appeared the above named David Spencer and acknowledged the foregoing instrument to be his free act and deed, before me, this 17 day of July, 1997.

  
Witness signature

SACHIYO TAKASE  
Witness name (please print)

**ASSIGNMENT**

I, Peter Belshaw of Somerville, Massachusetts, in consideration of one dollar and other valuable consideration paid to me by the President and Fellows of Harvard College, a corporation of the state of Massachusetts, having its principal place of business at 17 Quincy Street, Cambridge, MA 02138, the receipt of which is hereby acknowledged, do hereby sell, assign and transfer unto said

**President and Fellows of Harvard College**

Its successors and assigns, the entire interest for the United States of America and all foreign countries, including all rights of priority under the international convention for the protection of industrial property in a certain invention or improvement in

***Regulated Transcription of Targeted Genes and Other Biological Events***

Described in patent application serial no. 08/388,653 filed on 14 February 1995 in the United States Patent and Trademark Office, and in all letters patent of the United States and all foreign countries which may or shall be granted on said invention, or any parts thereof, or on said application, or any divisional, continuing, reissue or other applications based in whole or in part thereon. And I agree, for myself and my executors and administrators, with said corporation and its successors and assigns but at its or their expense and charges, hereafter to execute all applications, amended specifications, deed or other instrument, and to do all acts necessary or proper to secure the grant of letters patent in the united states and in all other countries to said corporation, with specifications and claims in such form as shall be approved by the counsel of said corporation and to vest and confirm in said corporation, its successors and assigns, the legal title to all such patents.

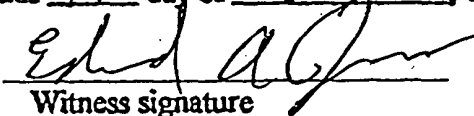
And I do hereby authorize and request the Commissioner of Patents and Trademarks of the United States to issue such letters patent as shall be granted upon said application or applications based thereon to said corporation, its successors and assigns.

Witness my hand this 17<sup>th</sup> day of July, 1997.

By: 

Peter Belshaw

Then personally appeared the above named Peter Belshaw and acknowledged the foregoing instrument to be his free act and deed, before me, this 17 day of July, 1997.

  
Witness signature

Edmund A. Jones

Witness name (please print)



**UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office**

ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

JUNE 02, 1999

PTAS

FOLEY, HOAG & ELIOT LLP  
MATTHEW P. VINCENT  
ONE POST OFFICE SQUARE  
BOSTON, MA 02109



\*100988259A\*

APV-31615



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RECORDATION DATE: 03/12/1999

REEL/FRAME: 9819/0987

NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

**ASSIGNOR:**

HO, STEFFAN N.

DOC DATE: 02/26/1999

**ASSIGNEE:**

BOARD OF TRUSTEES OF LELAND S.  
STANFORD JUNIOR UNIVERSITY  
STANFORD UNIVERSITY  
STANFORD, CALIFORNIA 94305

SERIAL NUMBER: 09157753

PATENT NUMBER:

FILING DATE: 09/16/1998

ISSUE DATE:

STEVEN POST, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

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JUN 15 1999

F.H. & E. LLP  
PATENT DEPT.

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03-19-1999

FORM PTO-1595  
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OMB No. 0651-0011 (exp. 4/94)

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To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

Steffan N. Ho

Additional name(s) of conveying party(ies) attached?

☐ Yes ☒ No

3. Nature of conveyance

☒ Assignment

☐ Merger

☐ Security Agreement

☐ Change of Name

Other \_\_\_\_\_

Execution Date: 2/26/99

2. Name and address of receiving party(ies)

Name: Board of Trustees of Leland S. Stanford Junior University

Street Address: Stanford University

City: Stanford

State: California

ZIP: 94305

Additional name(s) & address(es) attached? ☐ Yes ☒ No

Jc:490 U.S. PTO  
09/466568

12/17/99

4. Application number(s) or patent number(s):

A. Patent Application No.(s): 09/157,753

B. Patent No.(s):

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Matthew P. Vincent, Ph.D.

Telephone: (617) 832-1000

Internal Address: Foley, Hoag & Eliot LLP

Street Address: One Post Office Square

City: Boston State: MA ZIP: 02109

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.41).....\$40.00

☒ Enclosed

☐ Authorized to be charged to deposit account

8. Deposit account number: 06-1448

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9. Statement and signature: *To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*

Isabelle M. Clauss, Ph.D.

Name of Person Signing

Signature

Date

3/12/99

Total number of pages including cover sheet, attachments, and document:

03/18/1999

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01 FC:581

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Washington, D.C. 20231

**ASSIGNMENT**

I, Steffan N. Ho of San Diego, California, in consideration of one dollar and other valuable consideration paid to me by the Board of Trustees of the Leland Stanford Junior University, a corporation of the state of California, having its principal place of business at Stanford University, Stanford, California 94305, the receipt of which is hereby acknowledged, do hereby sell, assign and transfer unto said

**Board of Trustees of the Leland S. Stanford Junior University**

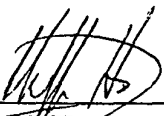
Its successors and assigns, the entire interest for the United States of America and all foreign countries, including all rights of priority under the international convention for the protection of industrial property in a certain invention or improvement in

***Regulated Transcription of Targeted Genes and Other Biological Events***

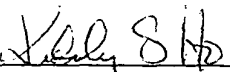
Described in patent application serial no. 09/157,753 filed on September 16, 1998 in the United States Patent and Trademark Office, and in all letters patent of the United States and all foreign countries which may or shall be granted on said invention, or any parts thereof, or on said application, or any divisional, continuing, reissue or other applications based in whole or in part thereon. And I agree, for myself and my executors and administrators, with said corporation and its successors and assigns but at its or their expense and charges, hereafter to execute all applications, amended specifications, deed or other instrument, and to do all acts necessary or proper to secure the grant of letters patent in the united states and in all other countries to said corporation, with specifications and claims in such form as shall be approved by the counsel of said corporation and to vest and confirm in said corporation, its successors and assigns, the legal title to all such patents.

And I do hereby authorize and request the Commissioner of Patents and Trademarks of the United States to issue such letters patent as shall be granted upon said application or applications based thereon to said corporation, its successors and assigns.

Witness my hand this 26 day of Feb, 1999.

By:   
Steffan N. Ho

Then personally appeared the above named Steffan N. Ho and acknowledged the foregoing instrument to be his free act and deed, before me, this 26 day of February, 1999.

  
Witness signature

Kimberly S. Ho  
Witness name (please print)